

Minnesota Department of Natural Resources

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September 3, 2008

Bill Storm, Project Manager
Department of Commerce
Office of Energy Security
85 7th Place East,
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Re: Extended Power Uprate at the Monticello Nuclear Generating Plant – Environmental Assessment
PUC Docket Number: E002/CN-08-185 (Certificate of Need)
PUC Docket Number: E002/GS-07-1567 (Site Permit)

Dear Mr. Storm:

The Minnesota Department of Natural Resources (MDNR) has reviewed the Environmental Assessment (EA) for the proposed Extended Power Uprate at the Monticello Nuclear Generating Plant (MNGP), in Wright County. The MDNR offers the following comments for your consideration.

Biological Resources (Aquatic) (page 33)

The MDNR has been directly involved with the negotiations and consultations for the licensing, permitting, and general operating procedures of the Monticello Nuclear Generating Plant. The span of our participation extends to before the original operating license in 1970. We have enjoyed a very productive relationship with Xcel, and a wealth of biological data has been gathered and distributed by Xcel over the operating life of the plant. The required monitoring of the fish populations, upstream and downstream of the plant discharge, has been conducted to provide assurance that any impairments to the aquatic biota of the river are avoided or reduced to the lowest practical level. Because of the Wild and Scenic River status and management of a high quality sport fishery, this reach of the Mississippi River is a very high priority for the MDNR.

The current thermal footprint, and temperature restrictions within the NPDES Permit have been high profile issues for this department since initiation of facility service. Although the thermal gradients throughout various times of the year induce some redistributions of certain fish species, there appears to be no substantial negative affects on fish to date. This has been a long and carefully monitored experiment with a headwater reach of the Mississippi River, and we have gradually acquired a reasonable trust that impacts have been minimized. However, this level of trust is predicated on the previously mentioned department involvement and Xcel staff environmental monitoring over many years.

We are not in agreement with one critical aspect of the facility uprate proposal in the Environmental Assessment document, and request that Xcel provide companion discussion of expanded cooling tower capacity that addresses the addition to the thermal load to the river. The 12% increase in rejected heat, and maximum of 4.5 degrees F. increase at the discharge canal should be process treated through the use of an additional 12% (plus margin of safety) of cooling tower capacity. We suggest that an auxiliary dry cooling tower could address this new increment of thermal loading to the river, and eliminate any concerns of impairment to aquatic biota. This type of design could provide the partial cooling necessary during winter operation when the existing wet cooling towers would be subject to severe maintenance issues. A dry tower would also be able to provide backup capacity for periods of low river flow and high atmospheric temperatures when Xcel has to reduce power to prevent exceeding NPDES Permit temperature limits. These periods generally occur when electrical demands are at peak and reducing power is counter to meeting the annually increasing demand.



Without the above referenced action, the MDNR will request to MPCA that the historical level of environmental monitoring by Xcel be resumed for a minimum of a 10-year period. This would not come without considerable cumulative cost to Xcel, and because of existing known subtle impacts to aquatic life the monitoring may very likely demonstrate increased environmental impact and need for additional cooling tower construction. If the new increment of heat is not discharged to the river, the Department would be glad to meet with Xcel officials to discuss cessation of the long-term aquatic biota monitoring.

The MDNR also has concern with increased thermal loading, during open cycle winter operation, contributing to the loss of fish life from cold shock. Cold shock can occur with temperature dropping too rapidly after either a planned or emergency shut down and subsequent loss of heat generation. As stated in the EA document, Xcel has administrative procedures for gradually reducing outfall temperature but these can only assist in reducing the incidence of loss of fish stocks in the vicinity of the outfall. We noted briefly a minimum of seven cold shock events since 1988, with 2007 having a total of 3300 dead fish. Our communications with Xcel tend to indicate that dead fish are generally counted within the discharge canal and that river currents do not make it conducive to account for fish that may have died in the river thermal plume. Again, addressing the increased potential for cold shock with an auxiliary tower would eliminate this resource concern.

Biological Resources (Rare and Unique Natural Resources) (page 35)

The temperature of cooling water discharges to the Mississippi River will increase from 1.7°F to 4.5°F, depending on the season. During the late fall and winter seasons, the thermal plume extending downstream of the plant prevents the normal ice formation on this part of the river. Additional heat loads would increase the plume's temperature and size of the open water zone. The warm open water area of the Mississippi River is attractive to migrating Trumpeter swans, which is a State threatened species. The number of swans over-wintering at this site has increased to several hundred birds. The congregation of these threatened birds into one large flock is a detriment to the survival of this Interior population. Serious potential for disease outbreaks on reduced winter ranges exist. The MDNR prefers that the birds reestablish normal migratory patterns and disperse southward. Although the MDNR has recently participated in feeding this population, the operation was in response to their entrapment during the winter season, at which time they are unable to find suitable habitat in close enough proximity to the site.

Also, the DNR would like to correct some inaccuracies: the peregrine falcon is a state-listed threatened species, not a species of special concern; and the trumpeter swan has been state-listed as threatened since 1996, a period of twelve years.

Biological Resources (Terrestrial) (page 34)

The Mississippi River between the Cities of St. Cloud and Anoka was designated as a State Wild and Scenic River in 1976, under authority of the Minnesota State Wild and Scenic Rivers Act (M.S. 103F.301-103F.345). This legislation directs MDNR to conduct studies, develop criteria for classification and designation of rivers, and adopt rules to manage and administer the wild and scenic rivers system.

In the administration of the Wild and Scenic River Management Plan, Xcel Energy Sherco and Monticello power plant sites are listed in the Sherburne and Wright county ordinances as permitted uses. The Act encourages Xcel Energy to work with the Department of Natural Resources in determining the most appropriate location for the development of any structures or related facilities that may be located within the riverway.

The Mississippi River corridor between St. Cloud and Anoka is a unique scenic area in Minnesota, with approximately 70 percent of the river corridor wooded, including numerous heavily wooded islands. The floodplain and bluffs (some of which are over 100 feet high) include remnants of the original prairie and oak

savannah plant communities. The contrasts of these two landscapes provides for a diversity of plant and animal species, as well as unique and varied landscape experiences and valuable residential building sites.

The largest undeveloped area is on land owned by Xcel Energy, which buffers two major power plants in the river corridor. Xcel Energy owns roughly 600 acres of forested habitats along the Mississippi River in the vicinity of the MNGP. Of this total, roughly 250 acres are classified as an oak savanna community type, for which there are few high quality examples remaining in Minnesota.

Considering the significance of these habitats, the MDNR recommends that Xcel provide additional resources and establish cooperative agreements towards restoring and managing these tracts within the buffer zone of MNGP. For example, there are restoration opportunities for improving the oak savanna community, currently impacted by heavy overgrowth; removing exotic species, especially buckthorn, but includes several others; reintroducing fire to the fire adapted systems, particularly prairie and oak savannas; and establishing best management practices for lowland forests.

The MDNR Central Region and Great River Greening have established relationships with Xcel to restore areas associated with the Sherco Power Plant. The MDNR encourages Xcel to use this uprate as an opportunity to improve management of MNGP lands. In addition to restoration opportunities listed above, there are several biomass harvest projects being considered near Xcel lands. The Woody Biomass Harvest for Habitat Restoration (also called Linking Habitat Restoration to Bioenergy) Project is an innovative new project that unites two separate but linked aspects of environmental health: habitat restoration and bioenergy. The inclusion of Xcel lands in a restoration project to produce biomass for energy, potentially in concurrence with other nearby projects, would restore valuable habitats while providing a local source of energy. Assistance is available to facilitate habitat restoration efforts that might not otherwise occur, while making the woody material generated as a by-product of restoration available to facilities that convert this material to energy. Please contact Barb Spears, MDNR Woody Biomass Project Coordinator at 651-259-5849 for more information and see the project's web page <http://www.dnr.state.mn.us/grants/habitat/biomass.html>. Proposals are due by September 19, 2008.

Thank you for the opportunity to provide comments on the EA and for your consideration of these comments. Please feel free to contact me with any questions or comments.

Sincerely yours,

A handwritten signature in black ink, appearing to read "Ronald Wieland", followed by a stylized flourish or mark.

Ronald Wieland, Senior Planner (651) 259-5157
Environmental Review Unit
Division of Ecological Resources

cc: Jack Enblom, Steve Colvin, Randall Doneen, Wayne Barstad, Michael North, Lisa Joyal, Hannah Texler, Barb Spears, Paul Diedrich, Kevin Stauffer, Scot Johnson, Brandon Smith (MPCA), Marilyn Danks, Carrol Henderson, Lori Naumann